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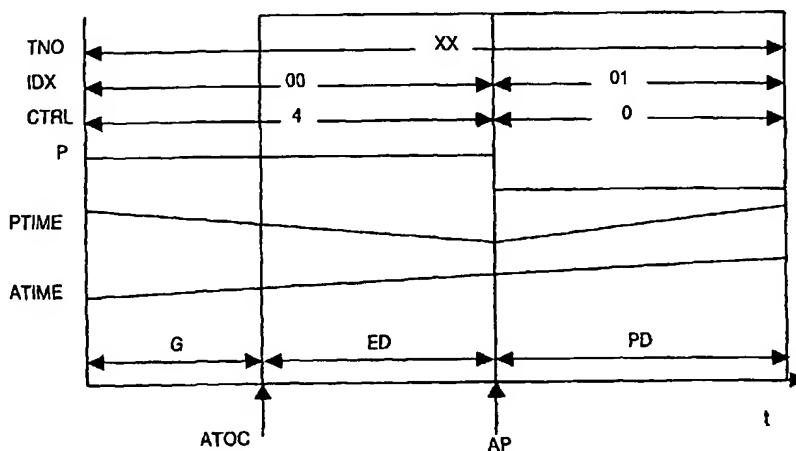
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[Continued on next page]

(54) Title: COPY PROTECTION SYSTEM FOR DATA CARRIERS



(57) Abstract: A data payload PD is recorded on a compact disc in a format including a lead-in indicating a track start address ATOC and a subchannel P which changes state at a payload start address AP, subsequent to the track start address ATOC. Data ED recorded at the track start address ATOC includes unrecoverable data. Where the data payload PD is an audio track, an audio-only player begins to search sequentially from the track start address ATOC until the subchannel changes state, and reproduces the audio track from that point. A data player, on the other hand, begins to reproduce data from the track start address ATOC. When the unrecoverable data is read, the read operation is aborted, as it appears that the data has been corrupted. This operation cannot be easily circumvented, because it is not normally acceptable to ignore corrupt CD-ROM data. The disc may also include a second session containing an encrypted version of the data payload PD, where each sector is encrypted using a different key which is derived from a sector address by an algorithm and requires a special player program which performs the decryption. A supervisory program prevents circumvention of the copy protection.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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## INTERNATIONAL SEARCH REPORT

Intern. Application No

PCT/GB 03/01006

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 G11B20/00 G11B20/12

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 G11B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/80546 A (ALCALAY RAN ; MIDBAR TECH LTD (IL); SELVE PHILIPPE (IL); SINQUIN PATRI) 25 October 2001 (2001-10-25) page 3, line 4 - line 13 page 3, line 19 - line 26 page 4, line 6 - line 13 page 8, line 26 - line 28 page 9, line 5 - line 27 page 14, line 18 - line 30 page 16, line 13 - line 23 -----	1,5,9,10
A	----- -/--	2-4,6-8

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \* & \* document member of the same patent family

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## INTERNATIONAL SEARCH REPORT

Intern Application No

PCT/GB 03/01006

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/74053 A (DILLA LTD C ; EDWARDS ROGER (GB)) 7 December 2000 (2000-12-07) abstract page 2, line 16 - line 22 page 2, line 30 - line 35 page 3, line 6 - line 13 page 5, line 31 - page 6, line 9 page 6, line 29 - page 7, line 2 page 8, line 10 - line 16	1,5,9,10
A	figure 5	2-4,6-8
X	US 2001/018743 A1 (MORISHITA TAKUYA) 30 August 2001 (2001-08-30)  abstract paragraph '0002! paragraph '0005! paragraph '0009! paragraph '0024! - paragraph '0030! paragraph '0037! paragraph '0047! paragraph '0060! paragraph '0063! - paragraph '0064!	11-13, 15-17, 20-25
A		14,18,19
X	WO 01/46952 A (LOCKSTREAM CORP) 28 June 2001 (2001-06-28)  abstract page 2, line 2 - line 12 page 3, line 31 - page 4, line 31 page 5, line 25 - page 6, line 2 page 6, line 13 - line 16	26,27, 29,30, 32-35
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A	WO 98/52194 A (IMATION CORP) 19 November 1998 (1998-11-19) page 2, line 6 - line 9 page 2, line 31 - page 3, line 5 page 6, line 29 - page 7, line 5 page 7, line 29 - line 36 page 8, line 23 - line 32	1-10
A	CDRINFO.COM: "Cactus Data Shield 200" WWW.CDRINFO.COM, 'Online! 26 January 2002 (2002-01-26), XP002261887 Retrieved from the Internet: URL: <a href="http://www.cdrinfo.com/Sections/Articles/PrinterFriendly.asp?ArticleHeadline=Cactus+Data+Shield+200">http://www.cdrinfo.com/Sections/Articles/PrinterFriendly.asp?ArticleHeadline=Cactus+Data+Shield+200</a> 'retrieved on 2003-11-18!	
A	US 5 596 639 A (KIKINIS DAN) 21 January 1997 (1997-01-21) column 4, line 37 - line 60 column 7, line 51 - line 63	

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB 03/01006

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International Application No. PCT/ GB 03 /01006

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-10

Use of unrecoverable data and misleading TOC information to prevent the playback of an audio signal from a CD medium when used in a CD-ROM drive. A subchannel is used to indicate a payload start position for a recoverable audio part in order to be able to play the audio track with an audio CD player.

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2. claims: 11-25

Use of encryption for protecting data content on a CD medium. Data is segmented in sectors and each sector is encrypted with an encryption key derived from the logical sector adress LBA of the start of that sector.

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3. claims: 26-35

Use of a memory resident supervisory program to restrict access to data on a CD when used in a CD-ROM drive. A command monitoring function intercepts commands sent by an application to the CD-ROM drive and determines whether the commands indicate an unauthorised activity.

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern Application No

PCT/GB 03/01006

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